

N60200.AR.008965
NAS CECIL FIELD
5090.3a

PLAN OF ACTION FOR CONTAMINATION ASSESSMENT AND REMEDIATION PLAN
NORTH FUEL FARM TRUCK STAND FACILITY 372 AND JP-5 SPILL SITE NORTH FUEL
FARM NAS CECIL FIELD FL
3/11/1993
ABB ENVIRONMENTAL

PLAN OF ACTION

**CONTAMINATION ASSESSMENT AND REMEDIATION PLAN
NORTH FUEL FARM,
TRUCK STAND - FACILITY 372, AND
JP-5 SPILL SITE AT NORTH FUEL FARM
NAVAL AIR STATION CECIL FIELD
JACKSONVILLE, FLORIDA**

**CONTRACT NO. N62467-89-D-0317
SOW NO. 70**

11 March 1993

Submitted By:

**ABB ENVIRONMENTAL SERVICES, INC.
1536 KINGSLEY AVENUE, SUITE 127
ORANGE PARK, FLORIDA 32301**

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I. INTRODUCTION

The North Fuel Farm (NFF) is located at the northeast corner of A Avenue and Loop Road at Naval Air Station (NAS) Cecil Field. Throughout the period the site has been in operation, releases of Jet Fuel (JP-5) have reportedly occurred. The most recent major release occurred on February 9 and 10, 1991. An estimated 900,000 gallons of JP-5 jet fuel overflowed from and subsequently ruptured storage tank 76E, entering Sal Taylor Creek. JP-5 was observed at seven locations along Sal Taylor Creek where the released fuel pooled around dams and ponds. Each of these seven areas, along with the immediate release area adjacent to tank 76E, will require a contamination assessment. These seven areas are identified as the Avord Dam site, North Containment Pond site, Gate 10 Dam site, Alpha Dam site, Avord/Perimeter Road site, Possum Dam site, and Gate 14 Dam site.

The Truck Stand-Facility 372 is located immediately southeast of the NFF site. Soil and groundwater contamination at the Truck Stand is associated with fuel releases during tanker truck refueling operations.

Previously, the North Fuel farm, Truck Stand, and JP-5 Spill were addressed as separate sites from both a financial and technical perspective. Southern Division Naval Facilities Engineering Command (SOUTHNAVFACENGCOM) has requested that ABB-ES address the remainder of the Contamination Assessments (CAs) and the Remedial Action Plans (RAPs) for these facilities as a single site, which will herein be designated as the North Fuel Farm Area (NFFA). To complete the work for the NFFA, the field investigation must be completed for the JP-5 Spill and a Contamination Assessment Report (CAR) submitted to Florida Department of Environmental Regulation (FDER) for that portion of the work. Additionally, CARs previously reviewed by FDER for the NFF and the Truck Stand must be modified by addendum to address FDER concerns. Additional field investigations must be conducted as required by FDER in letters to SOUTHNAVFACENGCOM of 22 June 1992 for the Truck Stand and of 17 September 1992 for the NFF.

This Plan of Action (POA) describes the proposed services for the work elements described in the Statement of Work (SOW No. 70, dated 24 February 1993) for the presentation of initial remedial action, completion of the field investigations, preparation of CARs or CAR addendum, and presentation of remedial action alternatives for the NFFA. The SOW provides no work elements for conducting Risk Assessments (RAs), if appropriate, for the site area associated with the JP-5 release, nor does it request the preparation of remedial action plans for any of the three NFFA sites. FDER Chapter 17-770.630(5) Florida Administrative Code (FAC), requires submittal of a RA if deemed necessary by FDER or if the person conducting the site rehabilitation wishes to (a) develop alternative Site Rehabilitation Levels other than the FDER target levels; or (b) justify a "No Further Action Plan" (NFAP) or "Monitoring Only" (MOP) proposed under certain circumstances. For the sites associated with the February 1991 release, RAs may provide a more cost effective and environmentally acceptable option for site cleanup. This takes into consideration that site areas are potentially located in wetland areas. The potential detrimental effect of activities typically associated with remedial actions may more likely adversely affect the wetland areas than improve them. To incorporate the requirements as set forth within the SOW, this POA will address only those work elements stated in the SOW and not the RA option. Therefore, this POA includes the following tasks:

- Project Management

Management responsibilities include: cost tracking, internal and external cost reporting, communication, and deliverable processing and review. Monthly progress reporting is considered separately under Task 1 below.

Task 1 - Monthly Progress Reports;

- Technical Activities

Task 2 - NFFA Position Paper on Alternatives for Initial Remedial Action;

Task 3 - Initial Remedial Action Presentation Meetings;

Task 4 - Contamination Assessment Field Investigation;

Task 5 - Presentation of Findings of Field Investigation and Remedial Alternatives for the NFFA; and

Task 6 - Preparation of a Contamination Assessment Report for the JP-5 Site, and Addenda for the Truck Stand and the North Fuel Farm

The following sections present the Scope of Services (Section II), Project Personnel (Section III), Schedule (Section IV), and Cost estimates (Section V) for each task.

II. SCOPE OF SERVICES

Task 1 - Project Management

ABB-ES will prepare Technical/Financial Monthly Reports (TFMR) in accordance with the provisions of Part V, Section 3 of the contract. Each report will be in the format required in the contract (Part IX, Attachment A) and will summarize activities performed, problems encountered, and proposed problem resolutions. It will also include an updated schedule in Gantt format. ABB-ES will notify SOUTHNAVFACENGCOM upon discovery of significant new site conditions, including imminent hazard or substantial endangerment, or deviation from the project schedule, plan, or budget.

The Work Plan reflects the preparation of 13 monthly TFMRS. The associated man-hours reflect the level of effort required to complete this task.

In addition to these activities, ABB-ES management responsibilities will include cost tracking, internal and external cost reporting, communication, and deliverable processing and review.

Task 2 - NFFA Position Paper on Alternatives for Initial Remedial Action

ABB-ES will develop a list of initial remedial action (IRA) alternatives for the NFFA site. These alternatives will then be evaluated. Based on results of the evaluation of alternatives, a Position Paper will be prepared and submitted to SOUTHNAVFACENGCOM.

Task 3 - Initial Remedial Action Presentation Meetings

Two meetings are proposed for presentation of the selected IRAs at the NFFA site. The first meeting will take place in Jacksonville, and the second presentation meeting will take place in Tallahassee with FDER. The purpose of these meetings is to present the selected IRAs for the NFFA site, and to open discussions with FDER for future IRAs. ABB-ES personnel proposed to participate in these meetings include the Task Order Manager, Technical Leader, and Field Operations Leader.

Task 4 - Contamination Assessment Field Investigation

Task 4 will include revision of the Contamination Assessment Plan (CAP) for the NFFA site for submittal to SOUTHNAVFACENGCOM prior to beginning any field work at the site. The CAP will present site background information, the overall technical approach, a description of the proposed field activities, field techniques and methodologies, and project milestones and time frames in Gantt Format. As part of the CAP preparation, ABB-ES will coordinate with appropriate Navy personnel at the North Fuel Farm and NAS Cecil Field to obtain readily available information pertinent to the site and related facilities, which may supersede previously supplied information. During the preparation of this revised CAP document, every attempt will be made to utilize existing information.

The existing Health and Safety Plan (HASP) will be modified to address health and safety concerns associated with the additional field work planned at the site, and submitted to SOUTHNAVFACENGCOM prior to beginning any field work. The HASP will contain site specific information on the contaminants of concern, routes to hospital(s), emergency phone number(s), emergency procedures, and health and safety concerns pertinent to the project site. During the preparation of this revised HASP document, existing information will be utilized where applicable.

ABB-ES will meet with FDER in Tallahassee to present the revised CAP for the NFFA site prior to initiation of any field activities. The purpose of this meeting will be to ensure open communications with FDER from the start of field investigation activities and to solicit any comments/input FDER may have regarding the proposed field investigation plan.

A start-up meeting will be held at the site to initiate the field investigation program. The purpose of this Contamination Assessment field investigation is to assess the vertical and horizontal extent of contamination above State regulatory limits as defined in FDER 17-770, Florida Administrative Code (FAC) and to characterize the petroleum contamination at the NFFA site. These activities will

incorporate FDER comments dated 22 June 1992 and 17 September 1992 regarding the previous work undertaken at the NFF and Truck Stand sites and discussions with FDER held on 4 January 1993 concerning the February 1991 JP-5 release.

It is estimated that approximately 305 additional soil borings will be drilled at the NFFA site. Soil samples will be collected using a hand operated auger and screened for Organic Vapor Analysis (OVA) in accordance with FDER Chapter 17-770, FAC. In addition, one soil sample will be collected at the water table from selected soil borings for field analyses and comparison with benzene, toluene, ethyl benzene, and xylenes (BTEX) standards, using a portable gas chromatograph. Soil sample screening of these borings will be used to assess the horizontal and vertical extent of soil contamination and provide data for placement of groundwater monitoring wells.

Approximately 31 shallow (15 feet below land surface (bls)) monitoring wells, four deep (25 to 30 feet bls) monitoring wells, and 10 manually installed monitoring wells will be installed to characterize and assess the horizontal and vertical extent of groundwater contamination at the NFFA sites. Monitoring wells and soil sample descriptions will also be used to develop data on the hydraulic properties of the surficial aquifer.

Groundwater samples will be collected from both existing and newly installed monitoring wells. A total of 115 groundwater samples will be analyzed for Kerosene analytical group constituents as described in FDER Chapter 17-770, FAC. One soil and one groundwater sample will be collected and analyzed for constituents that would be needed to prepare a remedial action plan for the Truck Stand and North Fuel Farm sites. Additionally, 19 surface water and 19 sediment samples will be collected and analyzed for Kerosene analytical group constituents. Surface water and sediment samples will be collected from the ponds associated with the Truck

Stand, the North Fuel Farm, and the JP-5 Spill site. In addition, surface water and sediment samples will be collected immediately upstream and downstream of each of the seven sites along Sal Taylor Creek. Approximately 59 Quality Assurance/Quality Control (QA/QC) samples will be collected and analyzed in accordance with ABB-ES's FDER approved Comprehensive Quality Assurance Plan (CompQAP).

A total of 30 slug tests will be performed during the NFFA field investigation. Three slug tests will be performed on one representative monitoring well from each site. The purpose of the slug tests is to estimate hydraulic conductivity, groundwater flow velocity, and other pertinent aquifer parameters for the preparation of the CAR.

A licensed Florida professional surveyor will be contracted to conduct a ground survey of the horizontal and vertical coordinates of each permanent monitoring well at the Truck Stand, North Fuel Farm, and the JP-5 Spill site immediately adjacent to the North Fuel Farm. This activity will take place after all permanent monitoring wells have been installed and after FDER has approved the recommendations for each site. The seven dam site locations along Sal Taylor Creek will be surveyed at a later date as part of the Remedial Action Plan (RAP) preparation activities. As such, the cost for this activity is not included in this POA. This position is taken in consideration of the fact that an accurate number of permanent monitoring wells cannot be determined at this time. In addition, the cost of conducting a

monitoring well survey along five miles of Sal Taylor Creek may be very expensive if all dam site locations do not require surveyed monitoring wells. The survey information will be incorporated into either the United States Coast and Geodetic Survey 1927 North Atlantic Datum (USGS NAD'27) or base coordinate grid system.

This project will also include a preliminary wetlands evaluation. The purpose of this evaluation will be to preliminarily demarcate wetlands for those areas found to be contaminated above regulatory limits.

With the assistance of the base Environmental Coordinator at NAS Cecil Field, the inventory of on-base potable water wells, within a 1/4-mile radius of the site previously conducted under CTO 23, will be verified or updated as necessary.

In keeping with the requirements set forth in SOW No. 70, ABB-ES will track on a subtask level basis those labor resource efforts associated with the development of 1) soil investigation; 2) well installation; and 3) groundwater sampling and analyses; and 4) other related activities. In addition, subcontracted costs for drilling and laboratory analyses will be segregated and tracked in conjunction with their assigned task.

Task 5 - Presentation of Findings of Field Investigation and Remedial Alternatives for the NFFA

Hydrogeological data and analytical results of groundwater, soil, surface water, and sediment samples for the NFFA sites will be summarized and clearly presented in tabular and graphical formats. In concert with input from the EIC, the results of the site investigation will be formatted so as to facilitate presentation of the data to large audiences. The focal point of the presentation will address the applicability of risk assessment or remedial action as alternatives for sites which cannot meet State regulatory requirements for No Further Action or Monitoring Only.

It is anticipated that a maximum of four meetings with agencies other than SOUTHNAVFACENGCOM will be convened to present the results of the field investigations. These meetings will be scheduled by the EIC.

Task 6 - Preparation of a Contamination Assessment Report for the JP-5 Site, and Addenda for the Truck Stand and the NFF

A Contamination Assessment Report will be prepared and submitted to SOUTHNAVFACENGCOM and the activity subsequent to completion of the field investigation for the JP-5 release area. Additionally, a CAR addendum will be prepared and submitted to SOUTHNAVFACENGCOM and the activity subsequent to the completion of the field investigation for the NFF and Truck Stand site areas. These report addenda will address comments in FDER's letters, dated 22 June 1992 and 17 September 1992 for the NFF and Truck Stand sites. Recommendations will be made in these CAR Addenda reports for the need of any follow-up reports including Monitoring Only Proposals (MOPs), No Further Action Proposals (NFAPs), or Remedial Action Plans (RAPs). Site location maps, locations of soil borings and monitoring

wells, and contaminant delineation maps will also be included with the reports.

III. PROJECT PERSONNEL

The designated roles for the contamination assessment program are as follows:

- Task Order Manager. The Task Order Manager of the Contamination Assessment at the NFF site will be Mr. Peter Redfern. Mr. Redfern is responsible for maintaining the project schedule and budget and for evaluating the appropriateness of the services provided for the CTO. Mr. Redfern is also responsible for the day-to-day conduct of the work, including the integration of the input of supporting disciplines and subcontractors. He will review quality control during the performance of the work and the clarity and usefulness of all project work products.

Specific responsibilities of this role include:

- initiating project activities;
- participating in the work plan preparation and staff assignments;
- identifying and fulfilling equipment and other resource requirements;
- monitoring task activities to ensure compliance with established budgets, schedules, and scope of work; and
- regularly interacting with the EIC, the Program Manager, the Department Manager, the Technical Leader, and others as appropriate, on the status of the project.

• Technical Leader. Mr. Michael J. Williams, P.G. will be the Technical Leader of the Contamination Assessment. Mr. Williams will be responsible for evaluating the appropriateness and adequacy of the technical services provided for the CTO and for developing the technical approach and LOE required to address each of the Work Plan tasks. Mr. Williams will also be responsible for reviewing quality control during the performance of the work, and the technical integrity of conclusions and recommendations.

Specific responsibilities of this role include:

- overall technical responsibility for the project;
- initiating project activities;
- participating in the work plan preparation;

- . monitoring the technical adequacy of task activities; and
- . regularly interacting with the EIC, Program Manager, Task Order Manager, Technical Director, and others as appropriate, on the status of the project.
- . Quality Review Board. A Quality Review Board comprised of the Board of Technical Directors and senior technical staff from the ABB-ES team will assist the Task Order Manager and Technical Leader by providing review of the technical aspects of the project to assure they are produced in accordance with corporate policy, and meet the requirements of SOUTHNAVFACENGCOM.

Kenneth Busen, P.G., and Willard Murray, Ph.D., P.E., of the Board of Technical Directors will comprise the ABB-ES technical quality review board and will be actively involved in assuring the quality of the technical and engineering services and appropriateness of methodologies, conclusions and recommendations of the Contamination Assessment.

IV. SCHEDULE

Attachment A depicts a Gantt Schedule, indicating the estimated duration and initiation/completion dates of individual tasks for the Contamination Assessment Program at NFFA.

V. COST

A cost estimate for the services described in this POA is provided in Attachment B.

VI. FEE ITEMIZATION FORM SCOPE LIMITATION

The purpose of this paragraph is to clearly define the scope and assumptions made for this fee proposal should it be necessary to enact provisions delineated at Part VII, Para. 22 of the subject contract in accordance with Federal Acquisition Regulations (FAR) 5243-2.

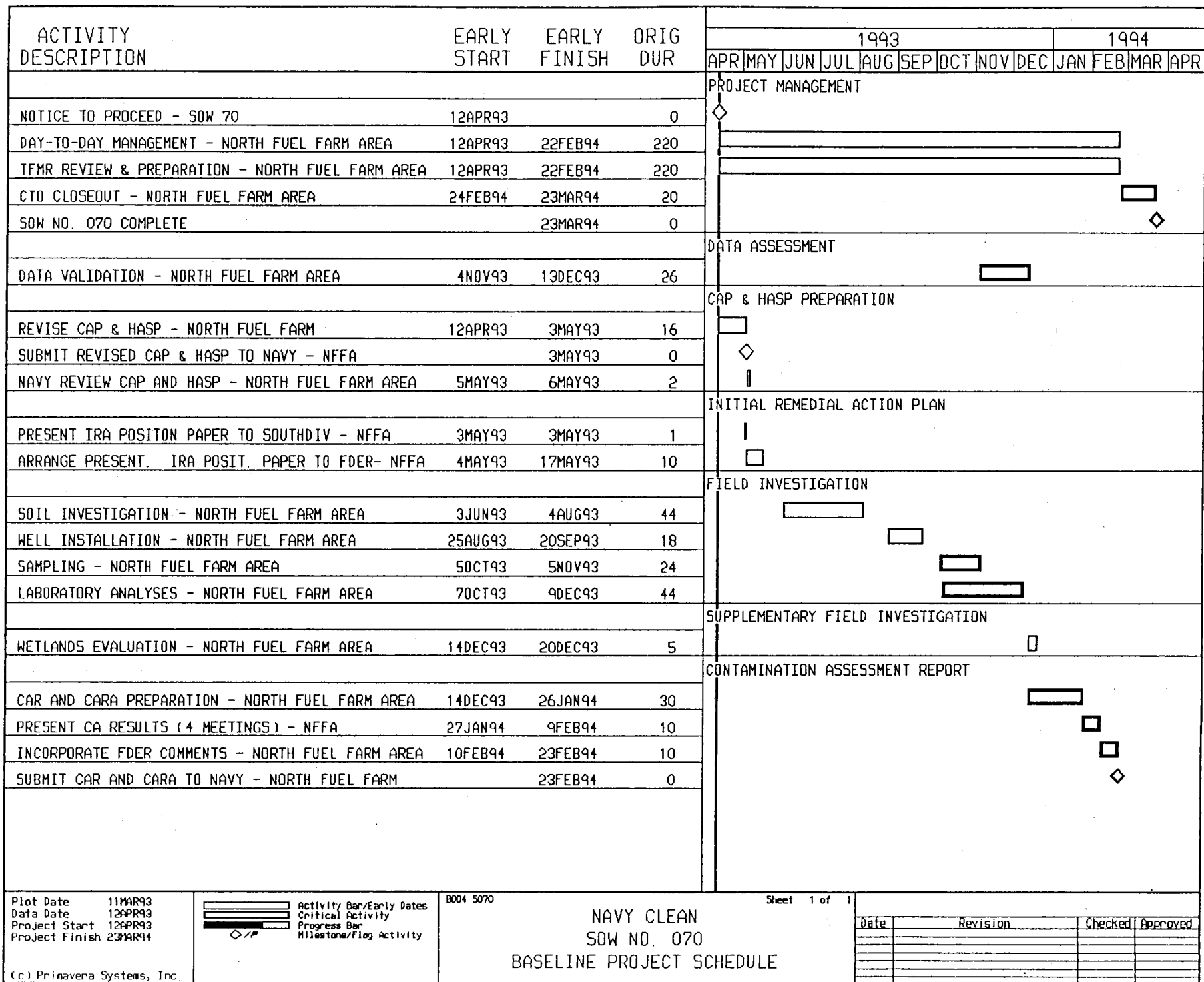
Specific Parameters:

As outlined specifically in Work Elements 1 through 6 of the SOW dated 10 November 1992.

Period of Performance Parameters:

It is estimated that costs will be incurred through March 1994.

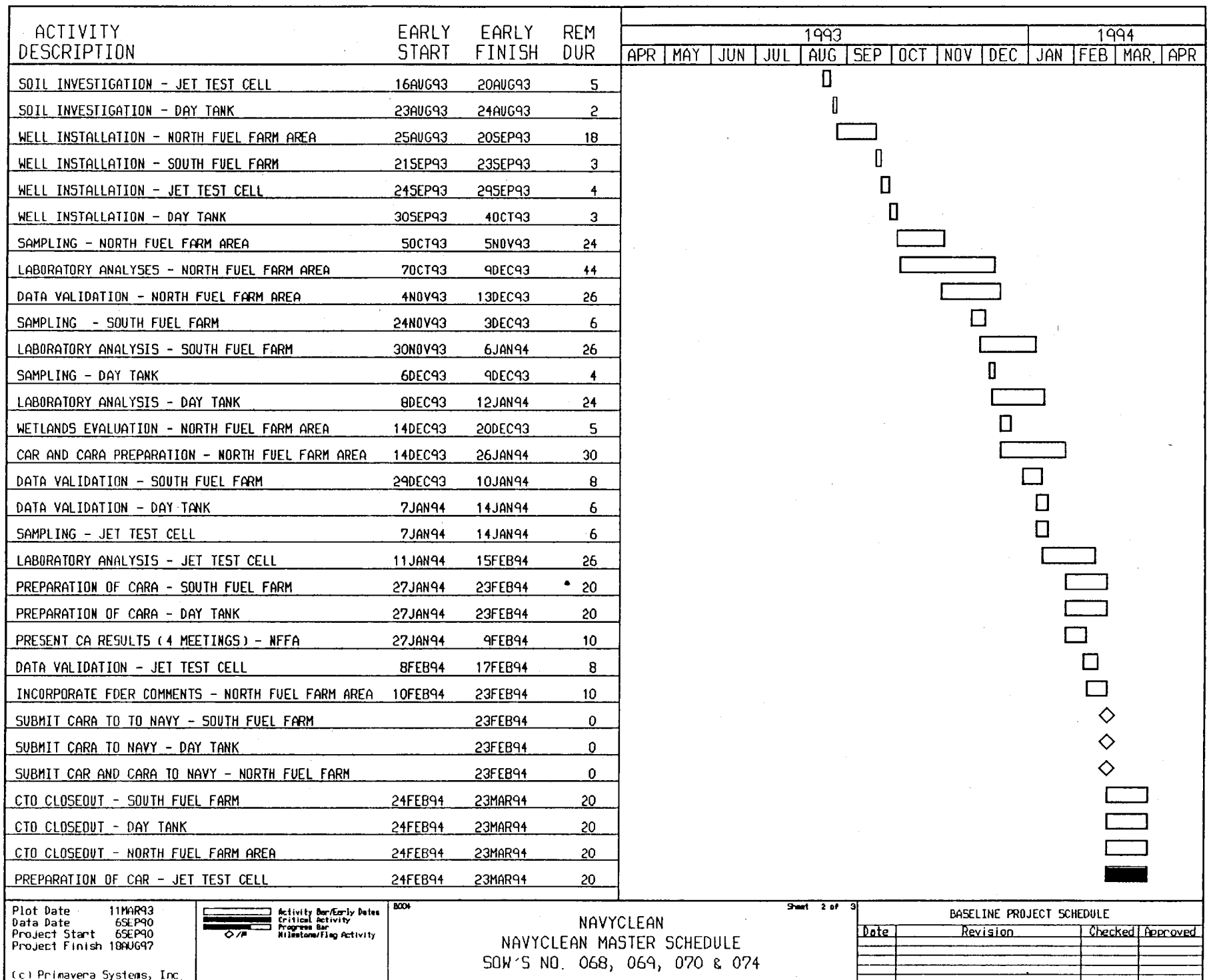
ATTACHMENT A
SCHEDULE







ACTIVITY DESCRIPTION	EARLY START	EARLY FINISH	REM DUR	1993												1994			
				APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR			
NOTICE TO PROCEED - SOW 68	12APR93		0	◇															
DAY-TO-DAY MANAGEMENT - SOUTH FUEL FARM	12APR93	22FEB94	220																
TFMR REVIEW & PREPARATION - SOUTH FUEL FARM	12APR93	22FEB94	220																
CAP & HASP PREPARATION - SOUTH FUEL FARM	12APR93	3MAY93	16																
NOTICE TO PROCEED - SOW 69	12APR93		0	◇															
DAY-TO-DAY MANAGEMENT - DAY TANK	12APR93	22FEB94	220																
TFMR REVIEW & PREPARATION - DAY TANK	12APR93	22FEB94	220																
REVISE CAP & HASP - DAY TANK	12APR93	3MAY93	16																
NOTICE TO PROCEED - SOW 70	12APR93		0	◇															
DAY-TO-DAY MANAGEMENT - NORTH FUEL FARM AREA	12APR93	22FEB94	220																
TFMR REVIEW & PREPARATION - NORTH FUEL FARM AREA	12APR93	22FEB94	220																
REVISE CAP & HASP - NORTH FUEL FARM	12APR93	3MAY93	16																
PREPARE IRA POSITION PAPER - NFFA	12APR93	30APR93	15																
NOTICE TO PROCEED - SOW 074	12APR93		0	◇															
DAY-TO-DAY MANAGEMENT - JET TEST CELL	12APR93	22MAR94	240																
TFMR REVIEW & PREPARATION - JET TEST CELL	12APR93	22MAR94	240																
REVISE CAP & HASP JET TEST CELL	12APR93	3MAY93	16																
SUBMIT CAP & HASP TO NAVY - SOUTH FUEL FARM		3MAY93	0		◇														
SUBMIT CAP & HASP TO NAVY - DAY TANK		3MAY93	0		◇														
SUBMIT REVISED CAP & HASP TO NAVY - NFFA		3MAY93	0		◇														
PRESENT IRA POSITON PAPER TO SOUTH DIV - NFFA	3MAY93	3MAY93	1																
SUBMIT CAP & HASP TO NAVY - JET TEST CELL		3MAY93	0		◇														
ARRANGE PRESENT, IRA POSIT. PAPER TO FDER- NFFA	4MAY93	17MAY93	10																
NAVY REVIEW CAP & HASP - JET TEST CELL	4MAY93	5MAY93	2																
NAVY REVIEW CAP & HASP - SOUTH FUEL FARM	5MAY93	6MAY93	2																
NAVY REVIEW CAP & HASP - DAY TANK	5MAY93	6MAY93	2																
NAVY REVIEW CAP AND HASP - NORTH FUEL FARM AREA	5MAY93	6MAY93	2																
PRESENT IRA POSITION PAPER TO FDER - NFFA	18MAY93	18MAY93	1																
ADDRESS FDER COMMENTS TO IRA POS. PAPER - NFFA	19MAY93	2JUN93	10																
SOIL INVESTIGATION - NORTH FUEL FARM AREA	3JUN93	4AUG93	44																
SOIL INVESTIGATION - SOUTH FUEL FARM	5AUG93	13AUG93	7																

Plot Date 11MAR93 Data Date 6SEP90 Project Start 6SEP90 Project Finish 18AUG97	<div><div></div><div></div><div></div></div> <div>Activity Bar/Early Dates Critical Activity Program Bar Milestone/Flag Activity</div>	BOOK	NAVYCLEAN NAVYCLEAN MASTER SCHEDULE SOW'S NO. 068, 069, 070 & 074	Sheet 1 of 3	<table><tr><th colspan="4">BASELINE PROJECT SCHEDULE</th></tr><tr><th>Date</th><th>Revision</th><th>Checked</th><th>Approved</th></tr><tr><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td></tr></table>	BASELINE PROJECT SCHEDULE				Date	Revision	Checked	Approved																				
BASELINE PROJECT SCHEDULE																																	
Date	Revision	Checked	Approved																														

(c) Primavera Systems, Inc.



ACTIVITY DESCRIPTION	EARLY START	EARLY FINISH	REM DUR	1993												1994			
				APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR			
				SOW NO. 068 COMPLETE		23MAR94	0												
SOW NO. 069 COMPLETE		23MAR94	0														◇		
SOW NO. 070 COMPLETE		23MAR94	0														◇		
SUBMIT CAR TO NAVY - JET TEST CELL		23MAR94	0														◆		
CTO CLOSEOUT - JET TEST CELL	24MAR94	20APR94	20														■		
SOW NO. 074 COMPLETE		20APR94	0														◆		

Plot Date 11MAR93	 Activity Bar/Early Dates  Critical Activity  Progress Bar  Milestone/Flag Activity	8004	NAVYCLEAN NAVYCLEAN MASTER SCHEDULE SOW'S NO. 068, 069, 070 & 074	BASELINE PROJECT SCHEDULE			
Date				Revision	Checked	Approved	

(c) Primavera Systems, Inc.

ATTACHMENT B

COST ESTIMATE

ATTACHMENT B

Cost Estimate

CLEAN FEE ITEMIZATION FORM SOUTH DIV ENVIRONMENTAL DIVISION

SOW: 70 DATE OF SCOPE: March 1993
DATE OF ESTIMATE: March 1993

A&E FIRM: ABB Environmental Services, Inc.
CONTRACT NO.: N62467-89-D-0317

PROJECT: Contamination Assessment & Remedial Plan for North Fuel Farm, JP-5 Spill Site & Truck Stand

FUNDING: DERA

ACTIVITY: NAS Cecil Field

UIC CODE: LOCATION:

		OFFICE		FIELDWORK		TOTAL	
ITEM	RATE/HR	LABOR HOURS	COST(\$)	LABOR HOURS	COST(\$)	LABOR HOURS	COST(\$)
Task Order Manager	Various	416	\$13,156			416	\$13,156
Technical Expert	Various	22	\$838			22	\$838
Principal Scientist	Various	221	\$7,047	12	\$378	233	\$7,425
Principal Engineer	Various						
Senior Scientist	Various	10	\$254	40	\$1,016	50	\$1,270
Senior Engineer	Various	414	\$10,716	745	\$18,916	1159	\$29,632
Scientist	Various						
Engineer	Various						
Associate Scientist	Various						
Associate Engineer	Various						
Associate Geologist	Various	385	\$6,180	771	\$12,028	1156	\$18,208
Senior Ecologist	Various						
Project Control Specialist	Various	52	\$1,338			52	\$1,338
Project Assistant	Various	243	\$2,803			243	\$2,803
Production Manager	Various	60	\$918			60	\$918
Health & Safety Manager	Various			4	\$109	4	\$109
Quality Assurance Manager	Various						
Senior Draftsperson/CAD	Various	500	\$7,626	8	\$121	508	\$7,747
Technician	Various						
Technical Editor	Various	30	\$466	2	\$30	32	\$496
Draftsperson	Various						
Clerk/Word Processor	Various	68	\$758	4	\$44	72	\$802
Project Assistant	Various						
Air Quality Engineer	Various						
Applied Ecologist	Various						
Graphics Technician	Various						
Technician	Various						
TOTAL DIRECT LABOR	XXXXX	2421	\$52,100	1586	\$32,642	4007	\$84,742
X Multiplier (2.38)						50	\$1,751
X Multiplier (1.98)		2421	\$51,058	1586	\$31,989	3957	\$81,799
Total Burdened Direct Labor	XXXXX	XXXXX	\$103,158	XXXXX	\$64,631	XXXXX	\$168,292

PART II – OTHER DIRECT COSTS (Itemized on Supplement Sheets)			
ITEM	UNIT COSTS(S)	QUANTITY	TOTAL
Telephone/Communications			\$453
Shipping – Correspondence			\$636
Shipping – Coolers			\$8,800
Expendables – Supplies			\$29,962
Other			\$1,092
Subtotal			\$40,943
X G & A (.02)			\$819
TOTAL OTHER DIRECT COSTS	XXXXXX	XXXXXX	\$41,762

PART III – TRAVEL (Itemized on Supplement Sheets)			
Airfare			\$920
Lodging			\$882
Per Diem			\$468
Car Rental/Fuel			\$800
Field Van/Fuel			
Other			
Subtotal			\$3,070
X G & A (.02)			\$61
TOTAL TRAVEL EXPENSES	XXXXXX	XXXXXX	\$3,131

PART IV – SUBCONTRACTOR SERVICES (Itemized on Supplement Sheets)			
Drilling			\$39,280
Laboratory			\$72,890
Survey			\$9,700
Report Reproduction			\$12
Other			
Other			
Other			
Other			
Subtotal			\$121,882
X G & A (.02)			\$2,438
TOTAL SUBCONTRACTOR EXPENSES	XXXXXX	XXXXXX	\$124,320

	TOTAL	
	LABOR HOURS	COST(S)
TOTAL PART I (DIRECT LABOR)	4007	\$168,292
TOTAL PART II (Other Direct Costs)		\$41,762
TOTAL PART III (Travel Expenses)		\$3,131
Award Fee Pool @ ____ % x Parts I, II, & III		\$213,185
Enter Award Fee % here 9%		\$19,187
Parts I, II, & III TOTAL		\$232,372
TOTAL PART IV (Subcontractor Expenses)		\$124,320
Award Fee Pool @ ____ % x Part IV		
Enter Award Fee % here 4.5%		\$5,594
Part IV TOTAL		\$129,914
TOTAL: (Parts I, II, & III)		\$232,372
(Part IV)		\$129,914
GRAND TOTAL		\$362,286
A&E Signature	Date	Telephone
ABB ENVIRONMENTAL SERVICES, INC.		904-656-1293
EIC Signature	Date	Code
		Code 18C Approval
		Date

ABB ENVIRONMENTAL SERVICES, INC.
TOTAL COST SUMMARY

PROJECT: Contamination Assessment & Remediation Plan for North Fuel Farm, JP-5 Spill Site
 and Truck Stand – NAS Cecil Field

MANAGER: Peter Redfern

Description	Base	Rate	Subtotal	Multiplier	Total
Senior Project Manager					
Task Order Manager	416	Various	\$13,156	1.98	\$26,050
Quality Assurance Manager		Various		1.98	
Project Manager					
Task Order Manager		Various		1.98	
Health & Safety Manager	4	Various	\$109	1.98	\$215
Senior Consulting Engineer/Scientist					
Technical Expert		Various		1.98	
Consulting Engineer/Scientist					
Technical Expert	22	Various	\$838	1.98	\$1,658
Principal Engineer/Scientist					
Senior Hydrologist		Various		1.98	
Senior Scientist	233	Various	\$7,425	1.98	\$14,702
Senior Engineer		Various		1.98	
Senior Chemist		Various		1.98	
Senior Engineer/Scientist					
Senior Hydrologist		Various		1.98	
Senior Scientist	50	Various	\$1,270	2.38	\$3,021
Senior Engineer	1159	Various	\$29,632	1.98	\$58,672
Senior Chemist		Various		1.98	
Project Control Specialist	52	Various	\$1,338	1.98	\$2,649
Associate Engineer/Scientist					
Engineer		Various		1.98	
Scientist		Various		1.98	
Air Quality Engineer		Various		1.98	
Applied Ecologist		Various		1.98	
Geologist	1156	Various	\$18,208	1.98	\$36,051
Chemist		Various		1.98	
Hydrologist		Various		1.98	
Quality Assurance Assistant		Various		1.98	
Toxicologist		Various		1.98	
Senior Technician					
Project Assistant		Various		1.98	
Production Manager	60	Various	\$918	1.98	\$1,817
Senior Draftsperson/CAD Operator	508	Various	\$7,747	1.98	\$15,339
Computer Programmer		Various		1.98	
Technician		Various		1.98	
Technical Editor	32	Various	\$496	1.98	\$982
Health & Safety Assistant		Various		1.98	
Technician					
Project Assistant	243	Various	\$2,803	1.98	\$5,549
Technician		Various		1.98	
Drafter					
Draftsperson		Various		1.98	
Clerical					
Clerk/Word Processor	72	Various	\$802	1.98	\$1,587
TOTAL LABOR:	4007		\$84,740		\$168,293

ABB ENVIRONMENTAL SERVICES, INC.
TOTAL COST SUMMARY

PROJECT: Contamination Assessment & Remediation Plan for North Fuel Farm, JP-5 Spill Site
and Truck Stand – NAS Cecil Field

MANAGER: Peter Redfern

Description	Base	Rate	Subtotal	Multiplier	Total
Air Fare			\$920	1.02	\$938
Lodging			\$882	1.02	\$900
Per Diem			\$468	1.02	\$477
Car Rental/Fuel		\$50.00	\$800	1.02	\$816
Field Van Rental/Fuel		\$80.00		1.02	
TOTAL TRAVEL:					\$3,131
Telephone/Telefax:		\$2.20	\$453	1.02	\$462
Shipping – Letter/Other		\$15.00	\$636	1.02	\$649
Shipping – Sample Cooler		\$100.00	\$8,800	1.02	\$8,976
Expendable Supplies			\$29,962	1.02	\$30,561
Other			\$930	1.02	\$949
Other			\$162	1.02	\$165
Other				1.02	
Other				1.02	
TOTAL OTHER DIRECT COSTS:					\$41,762
Drilling Services			\$39,280	1.02	\$40,066
Analytical Services			\$72,890	1.02	\$74,348
Surveying Services			\$9,700	1.02	\$9,894
Data Validation Services				1.02	
Reproduction			\$12	1.02	\$12
Geophysical Surveying Services				1.02	
Subconsultant				1.02	
Other				1.02	
Other				1.02	
Other				1.02	
Other				1.02	
TOTAL SUBCONTRACT COSTS:					\$124,320
TOTAL COST:					\$337,506
Award Fee – Labor, Travel & ODCs			\$213,187	0.09	\$19,187
Award Fee – Subcontract			\$124,320	0.045	\$5,594
TOTAL COST PLUS AWARD FEE:					\$362,287

ABB ENVIRONMENTAL SERVICES, INC.
LABOR SUMMARY – CALENDAR YEAR 1993

PROJECT: Contamination Assessment & Remediation Plan for North Fuel Farm, JP-5 Spill Site
 and Truck Stand – NAS Cecil Field

MANAGER: Peter Redfern

Description	Base	Rate	Subtotal	Multiplier	Total
Senior Project Manager					
Task Order Manager	288	\$31.26	\$9,003	1.98	\$17,826
Quality Assurance Manager		\$31.26		1.98	
Project Manager					
Task Order Manager		\$27.15		1.98	
Health & Safety Manager	4	\$27.15	\$109	1.98	\$215
Senior Consulting Engineer/Scientist					
Technical Expert		\$43.48		1.98	
Consulting Engineer/Scientist					
Technical Expert	9	\$37.11	\$334	1.98	\$661
Principal Engineer/Scientist					
Senior Hydrologist		\$31.51		1.98	
Senior Scientist	173	\$31.51	\$5,451	1.98	\$10,793
Senior Engineer		\$31.51		1.98	
Senior Chemist		\$31.51		1.98	
Senior Engineer/Scientist					
Senior Hydrologist		\$25.39		1.98	
Senior Scientist	50	\$25.39	\$1,270	2.38	\$3,021
Senior Engineer	974	\$25.39	\$24,730	1.98	\$48,965
Senior Chemist		\$25.39		1.98	
Project Control Specialist	36	\$25.39	\$914	1.98	\$1,810
Associate Engineer/Scientist					
Engineer		\$15.60		1.98	
Scientist		\$15.60		1.98	
Air Quality Engineer		\$15.60		1.98	
Applied Ecologist		\$15.60		1.98	
Geologist	900	\$15.60	\$14,040	1.98	\$27,799
Chemist		\$15.60		1.98	
Hydrologist		\$15.60		1.98	
Quality Assurance Assistant		\$15.60		1.98	
Toxicologist		\$15.60		1.98	
Senior Technician					
Project Assistant		\$15.16		1.98	
Production Manager	48	\$15.16	\$728	1.98	\$1,441
Senior Draftsperson/CAD Operator	440	\$15.16	\$6,670	1.98	\$13,207
Computer Programmer		\$15.16		1.98	
Technician		\$15.16		1.98	
Technical Editor	16	\$15.16	\$243	1.98	\$480
Health & Safety Assistant		\$15.16		1.98	
Technician					
Project Assistant	170	\$11.38	\$1,935	1.98	\$3,831
Technician		\$11.38		1.98	
Drafter					
Draftsperson		\$13.87		1.98	
Clerical					
Clerk/Word Processor	37	\$10.94	\$405	1.98	\$801
TOTAL LABOR:	3145		\$65,830		\$130,851

ABB ENVIRONMENTAL SERVICES, INC.
LABOR SUMMARY – CALENDAR YEAR 1994

PROJECT: Contamination Assessment & Remediation Plan for North Fuel Farm, JP-5 Spill Site
 and Truck Stand – NAS Cecil Field

MANAGER: Peter Redfern

Description	Base	Rate	Subtotal	Multiplier	Total
Senior Project Manager					
Task Order Manager	128	\$32.45	\$4,154	1.98	\$8,224
Quality Assurance Manager		\$32.45		1.98	
Project Manager					
Task Order Manager		\$28.18		1.98	
Health & Safety Manager		\$28.18		1.98	
Senior Consulting Engineer/Scientist					
Technical Expert		\$45.39		1.98	
Consulting Engineer/Scientist					
Technical Expert	13	\$38.74	\$504	1.98	\$997
Principal Engineer/Scientist					
Senior Hydrologist		\$32.90		1.98	
Senior Scientist	60	\$32.90	\$1,974	1.98	\$3,909
Senior Engineer		\$32.90		1.98	
Senior Chemist		\$32.90		1.98	
Senior Engineer/Scientist					
Senior Hydrologist		\$26.50		1.98	
Senior Scientist		\$26.50		1.98	
Senior Engineer	185	\$26.50	\$4,903	1.98	\$9,707
Senior Chemist		\$26.50		1.98	
Project Control Specialist	16	\$26.50	\$424	1.98	\$840
Associate Engineer/Scientist					
Engineer		\$16.28		1.98	
Scientist		\$16.28		1.98	
Air Quality Engineer		\$16.28		1.98	
Applied Ecologist		\$16.28		1.98	
Geologist	256	\$16.28	\$4,168	1.98	\$8,252
Chemist		\$16.28		1.98	
Hydrologist		\$16.28		1.98	
Quality Assurance Assistant		\$16.28		1.98	
Toxicologist		\$16.28		1.98	
Senior Technician					
Project Assistant		\$15.83		1.98	
Production Manager	12	\$15.83	\$190	1.98	\$376
Senior Draftsperson/CAD Operator	68	\$15.83	\$1,076	1.98	\$2,131
Computer Programmer		\$15.83		1.98	
Technician		\$15.83		1.98	
Technical Editor	16	\$15.83	\$253	1.98	\$501
Health & Safety Assistant		\$15.83		1.98	
Technician					
Project Assistant	73	\$11.89	\$868	1.98	\$1,719
Technician		\$11.89		1.98	
Drafter					
Draftsperson		\$14.48		1.98	
Clerical					
Clerk/Word Processor	35	\$11.34	\$397	1.98	\$786
TOTAL LABOR:					
	862		\$18,910		\$37,442

ABB ENVIRONMENTAL SERVICES, INC.

TASK: 1 – Project Management

**PROJECT: Contamination Assessment & Remediation Plan for North Fuel Farm, JP-5 Spill Site
and Truck Stand – NAS Cecil Field**

MANAGER: Peter Redfern

CY: 1993

Description	Base	Rate	Subtotal	Multiplier	Total
Senior Project Manager					
Task Order Manager	288	\$31.26	\$9,003	1.98	\$17,826
Quality Assurance Manager		\$31.26		1.98	
Project Manager					
Task Order Manager		\$27.15		1.98	
Health & Safety Manager		\$27.15		1.98	
Senior Consulting Engineer/Scientist					
Technical Expert		\$43.48		1.98	
Consulting Engineer/Scientist					
Technical Expert		\$37.11		1.98	
Principal Engineer/Scientist					
Senior Hydrologist		\$31.51		1.98	
Senior Scientist		\$31.51		1.98	
Senior Engineer		\$31.51		1.98	
Senior Chemist		\$31.51		1.98	
Senior Engineer/Scientist					
Senior Hydrologist		\$25.39		1.98	
Senior Scientist		\$25.39		1.98	
Senior Engineer		\$25.39		1.98	
Senior Chemist		\$25.39		1.98	
Project Control Specialist	36	\$25.39	\$914	1.98	\$1,810
Associate Engineer/Scientist					
Engineer		\$15.60		1.98	
Scientist		\$15.60		1.98	
Air Quality Engineer		\$15.60		1.98	
Applied Ecologist		\$15.60		1.98	
Geologist		\$15.60		1.98	
Chemist		\$15.60		1.98	
Hydrologist		\$15.60		1.98	
Quality Assurance Assistant		\$15.60		1.98	
Toxicologist		\$15.60		1.98	
Senior Technician					
Project Assistant		\$15.16		1.98	
Production Manager		\$15.16		1.98	
Senior Draftsperson/CAD Operator		\$15.16		1.98	
Computer Programmer		\$15.16		1.98	
Technician		\$15.16		1.98	
Technical Editor		\$15.16		1.98	
Health & Safety Assistant		\$15.16		1.98	
Technician					
Project Assistant	170	\$11.38	\$1,935	1.98	\$3,831
Technician		\$11.38		1.98	
Drafter					
Draftsperson		\$13.87		1.98	
Clerical					
Clerk/Word Processor		\$10.94		1.98	
TOTAL LABOR:	494		\$11,852		\$23,466

ABB ENVIRONMENTAL SERVICES, INC.

TASK: 1 – Project Management

**PROJECT: Contamination Assessment & Remediation Plan for North Fuel Farm, JP-5 Spill Site
and Truck Stand – NAS Cecil Field**

MANAGER: Peter Redfern

CY: 1994

Description	Base	Rate	Subtotal	Multiplier	Total
Senior Project Manager					
Task Order Manager	128	\$32.45	\$4,154	1.98	\$8,224
Quality Assurance Manager		\$32.45		1.98	
Project Manager					
Task Order Manager		\$28.18		1.98	
Health & Safety Manager		\$28.18		1.98	
Senior Consulting Engineer/Scientist					
Technical Expert		\$45.39		1.98	
Consulting Engineer/Scientist					
Technical Expert		\$38.74		1.98	
Principal Engineer/Scientist					
Senior Hydrologist		\$32.90		1.98	
Senior Scientist		\$32.90		1.98	
Senior Engineer		\$32.90		1.98	
Senior Chemist		\$32.90		1.98	
Senior Engineer/Scientist					
Senior Hydrologist		\$26.50		1.98	
Senior Scientist		\$26.50		1.98	
Senior Engineer		\$26.50		1.98	
Senior Chemist		\$26.50		1.98	
Project Control Specialist	16	\$26.50	\$424	1.98	\$840
Associate Engineer/Scientist					
Engineer		\$16.28		1.98	
Scientist		\$16.28		1.98	
Air Quality Engineer		\$16.28		1.98	
Applied Ecologist		\$16.28		1.98	
Geologist		\$16.28		1.98	
Chemist		\$16.28		1.98	
Hydrologist		\$16.28		1.98	
Quality Assurance Assistant		\$16.28		1.98	
Toxicologist		\$16.28		1.98	
Senior Technician					
Project Assistant		\$15.83		1.98	
Production Manager		\$15.83		1.98	
Senior Draftsperson/CAD Operator		\$15.83		1.98	
Computer Programmer		\$15.83		1.98	
Technician		\$15.83		1.98	
Technical Editor		\$15.83		1.98	
Health & Safety Assistant		\$15.83		1.98	
Technician					
Project Assistant	73	\$11.89	\$868	1.98	\$1,719
Technician		\$11.89		1.98	
Drafter					
Draftsperson		\$14.48		1.98	
Clerical					
Clerk/Word Processor		\$11.34		1.98	
TOTAL LABOR:					
	217		\$5,446		\$10,782

ABB ENVIRONMENTAL SERVICES, INC.

TASK: 1 – Project Management

**PROJECT: Contamination Assessment & Remediation Plan for North Fuel Farm, JP –5 Spill Site
and Truck Stand – NAS Cecil Field**

MANAGER: Peter Redfern

Description	Base	Rate	Subtotal	Multiplier	Total
Air Fare				1.02	
Lodging				1.02	
Per Diem				1.02	
Car Rental/Fuel		\$50.00		1.02	
Field Van Rental/Fuel		\$80.00		1.02	

TOTAL TRAVEL:

Telephone/Telefax:	48	\$2.20	\$106	1.02	\$108
Shipping – Letter/Other	12	\$6.75	\$81	1.02	\$83
Shipping – Sample Cooler		\$100.00		1.02	
Expendable Supplies				1.02	
Other				1.02	
Other				1.02	
Other				1.02	
Other				1.02	

TOTAL OTHER DIRECT COSTS:

\$190

Drilling Services				1.02	
Analytical Services				1.02	
Surveying Services				1.02	
Data Validation Services				1.02	
Reproduction				1.02	
Geophysical Surveying Services				1.02	
Subconsultant				1.02	
Other				1.02	
Other				1.02	
Other				1.02	
Other				1.02	

TOTAL SUBCONTRACT COSTS:

TOTAL COST:

\$34,439

Award Fee – Labor, Travel & ODCs	\$34,439	0.09	\$3,099
Award Fee – Subcontract		0.045	

TOTAL COST PLUS AWARD FEE:

\$37,538

ABB ENVIRONMENTAL SERVICES, INC.

TASK: 2 – Prepare NFFA Position Paper on Alternatives for Initial Remedial Action

**PROJECT: Contamination Assessment & Remediation Plan for North Fuel Farm, JP-5 Spill Site
and Truck Stand – NAS Cecil Field**

MANAGER: Peter Redfern

CY: 1993

Description	Base	Rate	Subtotal	Multiplier	Total
Senior Project Manager					
Task Order Manager		\$31.26		1.98	
Quality Assurance Manager		\$31.26		1.98	
Project Manager					
Task Order Manager		\$27.15		1.98	
Health & Safety Manager		\$27.15		1.98	
Senior Consulting Engineer/Scientist					
Technical Expert		\$43.48		1.98	
Consulting Engineer/Scientist					
Technical Expert	2	\$37.11	\$74	1.98	\$147
Principal Engineer/Scientist					
Senior Hydrologist		\$31.51		1.98	
Senior Scientist	26	\$31.51	\$819	1.98	\$1,622
Senior Engineer		\$31.51		1.98	
Senior Chemist		\$31.51		1.98	
Senior Engineer/Scientist					
Senior Hydrologist		\$25.39		1.98	
Senior Scientist	10	\$25.39	\$254	2.38	\$604
Senior Engineer	32	\$25.39	\$812	1.98	\$1,609
Senior Chemist		\$25.39		1.98	
Project Control Specialist		\$25.39		1.98	
Associate Engineer/Scientist					
Engineer		\$15.60		1.98	
Scientist		\$15.60		1.98	
Air Quality Engineer		\$15.60		1.98	
Applied Ecologist		\$15.60		1.98	
Geologist	4	\$15.60	\$62	1.98	\$124
Chemist		\$15.60		1.98	
Hydrologist		\$15.60		1.98	
Quality Assurance Assistant		\$15.60		1.98	
Toxicologist		\$15.60		1.98	
Senior Technician					
Project Assistant		\$15.16		1.98	
Production Manager	18	\$15.16	\$273	1.98	\$540
Senior Draftsperson/CAD Operator	160	\$15.16	\$2,426	1.98	\$4,803
Computer Programmer		\$15.16		1.98	
Technician		\$15.16		1.98	
Technical Editor	4	\$15.16	\$61	1.98	\$120
Health & Safety Assistant		\$15.16		1.98	
Technician					
Project Assistant		\$11.38		1.98	
Technician		\$11.38		1.98	
Drafter					
Draftsperson		\$13.87		1.98	
Clerical					
Clerk/Word Processor	8	\$10.94	\$88	1.98	\$173
TOTAL LABOR:					
	264		\$4,869		\$9,742

ABB ENVIRONMENTAL SERVICES, INC.**TASK: 2 – Prepare NFFA Position Paper on Alternatives for Initial Remedial Action****PROJECT: Contamination Assessment & Remediation Plan for North Fuel Farm, JP-5 Spill Site
and Truck Stand – NAS Cecil Field****MANAGER: Peter Redfern**

Description	Base	Rate	Subtotal	Multiplier	Total
Air Fare				1.02	
Lodging				1.02	
Per Diem				1.02	
Car Rental/Fuel		\$50.00		1.02	
Field Van Rental/Fuel		\$80.00		1.02	
TOTAL TRAVEL:					
Telephone/Telefax:	40	\$2.20	\$88	1.02	\$90
Shipping – Letter/Other	2	\$15.00	\$30	1.02	\$31
Shipping – Sample Cooler		\$100.00		1.02	
Expendable Supplies			\$386	1.02	\$394
Other – Computer Usage			\$180	1.02	\$184
Other – Binders	12	\$6.75	\$81	1.02	\$83
Other				1.02	
Other				1.02	
TOTAL OTHER DIRECT COSTS:					\$780
Drilling Services				1.02	
Analytical Services				1.02	
Surveying Services				1.02	
Data Validation Services				1.02	
Reproduction				1.02	
Geophysical Surveying Services				1.02	
Subconsultant				1.02	
Other				1.02	
Other				1.02	
Other				1.02	
Other				1.02	
TOTAL SUBCONTRACT COSTS:					
TOTAL COST:					
					\$10,522
Award Fee – Labor, Travel & ODCs			\$10,522	0.09	\$947
Award Fee – Subcontract				0.045	
TOTAL COST PLUS AWARD FEE:					\$11,469

ABB ENVIRONMENTAL SERVICES, INC.

TASK: 3 – Remedial Action Presentation Meetings

**PROJECT: Contamination Assessment & Remediation Plan for North Fuel Farm, JP–5 Spill Site
and Truck Stand – NAS Cecil Field**

MANAGER: Peter Redfern

CY: 1993

Description	Base	Rate	Subtotal	Multiplier	Total
Senior Project Manager					
Task Order Manager		\$31.26		1.98	
Quality Assurance Manager		\$31.26		1.98	
Project Manager					
Task Order Manager		\$27.15		1.98	
Health & Safety Manager		\$27.15		1.98	
Senior Consulting Engineer/Scientist					
Technical Expert		\$43.48		1.98	
Consulting Engineer/Scientist					
Technical Expert		\$37.11		1.98	
Principal Engineer/Scientist					
Senior Hydrologist		\$31.51		1.98	
Senior Scientist	36	\$31.51	\$1,134	1.98	\$2,246
Senior Engineer		\$31.51		1.98	
Senior Chemist		\$31.51		1.98	
Senior Engineer/Scientist					
Senior Hydrologist		\$25.39		1.98	
Senior Scientist		\$25.39		1.98	
Senior Engineer	30	\$25.39	\$762	1.98	\$1,508
Senior Chemist		\$25.39		1.98	
Project Control Specialist		\$25.39		1.98	
Associate Engineer/Scientist					
Engineer		\$15.60		1.98	
Scientist		\$15.60		1.98	
Air Quality Engineer		\$15.60		1.98	
Applied Ecologist		\$15.60		1.98	
Geologist		\$15.60		1.98	
Chemist		\$15.60		1.98	
Hydrologist		\$15.60		1.98	
Quality Assurance Assistant		\$15.60		1.98	
Toxicologist		\$15.60		1.98	
Senior Technician					
Project Assistant		\$15.16		1.98	
Production Manager		\$15.16		1.98	
Senior Draftsperson/CAD Operator	7	\$15.16	\$106	1.98	\$210
Computer Programmer		\$15.16		1.98	
Technician		\$15.16		1.98	
Technical Editor	2	\$15.16	\$30	1.98	\$60
Health & Safety Assistant		\$15.16		1.98	
Technician					
Project Assistant		\$11.38		1.98	
Technician		\$11.38		1.98	
Drafter					
Draftsperson		\$13.87		1.98	
Clerical					
Clerk/Word Processor		\$10.94		1.98	
TOTAL LABOR:	75		\$2,033		\$4,024

ABB ENVIRONMENTAL SERVICES, INC.

TASK: 3 – Remedial Action Presentation Meetings

**PROJECT: Contamination Assessment & Remediation Plan for North Fuel Farm, JP-5 Spill Site
and Truck Stand – NAS Cecil Field**

MANAGER: Peter Redfern

Description	Base	Rate	Subtotal	Multiplier	Total
Air Fare				1.02	
Lodging	3	\$49.00	\$147	1.02	\$150
Per Diem	3	\$26.00	\$78	1.02	\$80
Car Rental/Fuel	1	\$50.00	\$50	1.02	\$51
Field Van Rental/Fuel		\$80.00		1.02	
TOTAL TRAVEL:					\$281
Telephone/Telefax:	10	\$2.20	\$22	1.02	\$22
Shipping – Letter/Other	1	\$15.00	\$15	1.02	\$15
Shipping – Sample Cooler		\$100.00		1.02	
Expendable Supplies				1.02	
Other				1.02	
Other				1.02	
Other				1.02	
Other				1.02	
TOTAL OTHER DIRECT COSTS:					\$38
Drilling Services				1.02	
Analytical Services				1.02	
Surveying Services				1.02	
Data Validation Services				1.02	
Reproduction				1.02	
Geophysical Surveying Services				1.02	
Subconsultant				1.02	
Other				1.02	
Other				1.02	
Other				1.02	
Other				1.02	
TOTAL SUBCONTRACT COSTS:					
TOTAL COST:					\$4,343
Award Fee – Labor, Travel & ODCs			\$4,343	0.09	\$391
Award Fee – Subcontract				0.045	
TOTAL COST PLUS AWARD FEE:					\$4,733

ABB ENVIRONMENTAL SERVICES, INC.

TASK: 4 – Contamination Assessment Field Investigation

**PROJECT: Contamination Assessment & Remediation Plan for North Fuel Farm, JP-5 Spill Site
and Truck Stand – NAS Cecil Field**

MANAGER: Peter Redfern

CY: 1993

Description	Base	Rate	Subtotal	Multiplier	Total
Senior Project Manager					
Task Order Manager		\$31.26		1.98	
Quality Assurance Manager		\$31.26		1.98	
Project Manager					
Task Order Manager		\$27.15		1.98	
Health & Safety Manager	4	\$27.15	\$109	1.98	\$215
Senior Consulting Engineer/Scientist					
Technical Expert		\$43.48		1.98	
Consulting Engineer/Scientist					
Technical Expert		\$37.11		1.98	
Principal Engineer/Scientist					
Senior Hydrologist		\$31.51		1.98	
Senior Scientist	12	\$31.51	\$378	1.98	\$749
Senior Engineer		\$31.51		1.98	
Senior Chemist		\$31.51		1.98	
Senior Engineer/Scientist					
Senior Hydrologist		\$25.39		1.98	
Senior Scientist	40	\$25.39	\$1,016	2.38	\$2,417
Senior Engineer	745	\$25.39	\$18,916	1.98	\$37,453
Senior Chemist		\$25.39		1.98	
Project Control Specialist		\$25.39		1.98	
Associate Engineer/Scientist					
Engineer		\$15.60		1.98	
Scientist		\$15.60		1.98	
Air Quality Engineer		\$15.60		1.98	
Applied Ecologist		\$15.60		1.98	
Geologist	771	\$15.60	\$12,028	1.98	\$23,815
Chemist		\$15.60		1.98	
Hydrologist		\$15.60		1.98	
Quality Assurance Assistant		\$15.60		1.98	
Toxicologist		\$15.60		1.98	
Senior Technician					
Project Assistant		\$15.16		1.98	
Production Manager		\$15.16		1.98	
Senior Draftsperson/CAD Operator	8	\$15.16	\$121	1.98	\$240
Computer Programmer		\$15.16		1.98	
Technician		\$15.16		1.98	
Technical Editor	2	\$15.16	\$30	1.98	\$60
Health & Safety Assistant		\$15.16		1.98	
Technician					
Project Assistant		\$11.38		1.98	
Technician		\$11.38		1.98	
Drafter					
Draftsperson		\$13.87		1.98	
Clerical					
Clerk/Word Processor	4	\$10.94	\$44	1.98	\$87
TOTAL LABOR:					
	1586		\$32,641		\$65,035

ABB ENVIRONMENTAL SERVICES, INC.**TASK: 4 – Contamination Assessment Field Investigation****PROJECT: Contamination Assessment & Remediation Plan for North Fuel Farm, JP-5 Spill Site
and Truck Stand – NAS Cecil Field****MANAGER: Peter Redfern**

Description	Base	Rate	Subtotal	Multiplier	Total
Air Fare	1	\$920.00	\$920	1.02	\$938
Lodging	5	\$49.00	\$245	1.02	\$250
Per Diem	5	\$26.00	\$130	1.02	\$133
Car Rental/Fuel	5	\$50.00	\$250	1.02	\$255
Field Van Rental/Fuel		\$80.00		1.02	
TOTAL TRAVEL:					\$1,576
Telephone/Telefax:	68	\$2.20	\$150	1.02	\$153
Shipping – Letter/Other		\$15.00		1.02	
Shipping – Sample Cooler	88	\$100.00	\$8,800	1.02	\$8,976
Expendable Supplies			\$29,376	1.02	\$29,963
Other				1.02	
Other				1.02	
Other				1.02	
Other				1.02	
TOTAL OTHER DIRECT COSTS:					\$39,092
Drilling Services			\$39,280	1.02	\$40,066
Analytical Services			\$72,890	1.02	\$74,348
Surveying Services			\$9,700	1.02	\$9,894
Data Validation Services				1.02	
Reproduction				1.02	
Geophysical Surveying Services				1.02	
Subconsultant				1.02	
Other				1.02	
Other				1.02	
Other				1.02	
Other				1.02	
TOTAL SUBCONTRACT COSTS:					\$124,307
TOTAL COST:					\$230,010
Award Fee – Labor, Travel & ODCs			\$105,703	0.09	\$9,513
Award Fee – Subcontract			\$124,307	0.045	\$5,594
TOTAL COST PLUS AWARD FEE:					\$245,118

ABB ENVIRONMENTAL SERVICES, INC.

TASK: 5 – Presentation of Findings of Field Investigation @ NFFA

PROJECT: Contamination Assessment & Remediation Plan for North Fuel Farm, JP-5 Spill Site
and Truck Stand – NAS Cecil Field

MANAGER: Peter Redfern

CY: 1993

Description	Base	Rate	Subtotal	Multiplier	Total
Senior Project Manager					
Task Order Manager		\$31.26		1.98	
Quality Assurance Manager		\$31.26		1.98	
Project Manager					
Task Order Manager		\$27.15		1.98	
Health & Safety Manager		\$27.15		1.98	
Senior Consulting Engineer/Scientist					
Technical Expert		\$43.48		1.98	
Consulting Engineer/Scientist					
Technical Expert		\$37.11		1.98	
Principal Engineer/Scientist					
Senior Hydrologist		\$31.51		1.98	
Senior Scientist	68	\$31.51	\$2,143	1.98	\$4,243
Senior Engineer		\$31.51		1.98	
Senior Chemist		\$31.51		1.98	
Senior Engineer/Scientist					
Senior Hydrologist		\$25.39		1.98	
Senior Scientist		\$25.39		1.98	
Senior Engineer	76	\$25.39	\$1,930	1.98	\$3,821
Senior Chemist		\$25.39		1.98	
Project Control Specialist		\$25.39		1.98	
Associate Engineer/Scientist					
Engineer		\$15.60		1.98	
Scientist		\$15.60		1.98	
Air Quality Engineer		\$15.60		1.98	
Applied Ecologist		\$15.60		1.98	
Geologist		\$15.60		1.98	
Chemist		\$15.60		1.98	
Hydrologist		\$15.60		1.98	
Quality Assurance Assistant		\$15.60		1.98	
Toxicologist		\$15.60		1.98	
Senior Technician					
Project Assistant		\$15.16		1.98	
Production Manager	24	\$15.16	\$364	1.98	\$720
Senior Draftsperson/CAD Operator	232	\$15.16	\$3,517	1.98	\$6,964
Computer Programmer		\$15.16		1.98	
Technician		\$15.16		1.98	
Technical Editor		\$15.16		1.98	
Health & Safety Assistant		\$15.16		1.98	
Technician					
Project Assistant		\$11.38		1.98	
Technician		\$11.38		1.98	
Drafter					
Draftsperson		\$13.87		1.98	
Clerical					
Clerk/Word Processor	8	\$10.94	\$88	1.98	\$173
TOTAL LABOR:					
	408		\$8,041		\$15,921

ABB ENVIRONMENTAL SERVICES, INC.

TASK: 5 – Presentation of Findings of Field Investigation @ NFFA

**PROJECT: Contamination Assessment & Remediation Plan for North Fuel Farm, JP-5 Spill Site
and Truck Stand – NAS Cecil Field**

MANAGER: Peter Redfern

Description	Base	Rate	Subtotal	Multiplier	Total
Air Fare				1.02	
Lodging	10	\$49.00	\$490	1.02	\$500
Per Diem	10	\$26.00	\$260	1.02	\$265
Car Rental/Fuel	10	\$50.00	\$500	1.02	\$510
Field Van Rental/Fuel		\$80.00		1.02	
TOTAL TRAVEL:					\$1,275
Telephone/Telefax:	10	\$2.20	\$22	1.02	\$22
Shipping – Letter/Other	4	\$15.00	\$60	1.02	\$61
Shipping – Sample Cooler		\$100.00		1.02	
Expendable Supplies			\$200	1.02	\$204
Other – Computer Usage			\$312	1.02	\$318
Other – Binders	12	\$6.75	\$81	1.02	\$83
Other				1.02	
Other				1.02	
TOTAL OTHER DIRECT COSTS:					\$689
Drilling Services				1.02	
Analytical Services				1.02	
Surveying Services				1.02	
Data Validation Services				1.02	
Reproduction				1.02	
Geophysical Surveying Services				1.02	
Subconsultant				1.02	
Other				1.02	
Other				1.02	
Other				1.02	
Other				1.02	
TOTAL SUBCONTRACT COSTS:					
TOTAL COST:					\$17,884
Award Fee – Labor, Travel & ODCs			\$17,884	0.09	\$1,610
Award Fee – Subcontract				0.045	
TOTAL COST PLUS AWARD FEE:					\$19,494

ABB ENVIRONMENTAL SERVICES, INC.

TASK: 6 – Prepare CAR for JP–5 Site + Addenda for Truck Stand & North Fuel Farm

PROJECT: Contamination Assessment & Remediation Plan for North Fuel Farm, JP–5 Spill Site
and Truck Stand – NAS Cecil Field

MANAGER: Peter Redfern

CY: 1993

Description	Base	Rate	Subtotal	Multiplier	Total
Senior Project Manager					
Task Order Manager		\$31.26		1.98	
Quality Assurance Manager		\$31.26		1.98	
Project Manager					
Task Order Manager		\$27.15		1.98	
Health & Safety Manager		\$27.15		1.98	
Senior Consulting Engineer/Scientist					
Technical Expert		\$43.48		1.98	
Consulting Engineer/Scientist					
Technical Expert	7	\$37.11	\$260	1.98	\$514
Principal Engineer/Scientist					
Senior Hydrologist		\$31.51		1.98	
Senior Scientist	31	\$31.51	\$977	1.98	\$1,934
Senior Engineer		\$31.51		1.98	
Senior Chemist		\$31.51		1.98	
Senior Engineer/Scientist					
Senior Hydrologist		\$25.39		1.98	
Senior Scientist		\$25.39		1.98	
Senior Engineer	91	\$25.39	\$2,310	1.98	\$4,575
Senior Chemist		\$25.39		1.98	
Project Control Specialist		\$25.39		1.98	
Associate Engineer/Scientist					
Engineer		\$15.60		1.98	
Scientist		\$15.60		1.98	
Air Quality Engineer		\$15.60		1.98	
Applied Ecologist		\$15.60		1.98	
Geologist	125	\$15.60	\$1,950	1.98	\$3,861
Chemist		\$15.60		1.98	
Hydrologist		\$15.60		1.98	
Quality Assurance Assistant		\$15.60		1.98	
Toxicologist		\$15.60		1.98	
Senior Technician					
Project Assistant		\$15.16		1.98	
Production Manager	6	\$15.16	\$91	1.98	\$180
Senior Draftsperson/CAD Operator	33	\$15.16	\$500	1.98	\$991
Computer Programmer		\$15.16		1.98	
Technician		\$15.16		1.98	
Technical Editor	8	\$15.16	\$121	1.98	\$240
Health & Safety Assistant		\$15.16		1.98	
Technician					
Project Assistant		\$11.38		1.98	
Technician		\$11.38		1.98	
Drafter					
Draftsperson		\$13.87		1.98	
Clerical					
Clerk/Word Processor	17	\$10.94	\$186	1.98	\$368
TOTAL LABOR:	318		\$6,396		\$12,663

ABB ENVIRONMENTAL SERVICES, INC.

TASK: 6 – Prepare CAR for JP–5 Site + Addenda for Truck Stand & North Fuel Farm

PROJECT: Contamination Assessment & Remediation Plan for North Fuel Farm, JP–5 Spill Site
and Truck Stand – NAS Cecil Field

MANAGER: Peter Redfern

CY: 1994

Description	Base	Rate	Subtotal	Multiplier	Total
Senior Project Manager					
Task Order Manager		\$32.45		1.98	
Quality Assurance Manager		\$32.45		1.98	
Project Manager					
Task Order Manager		\$28.18		1.98	
Health & Safety Manager		\$28.18		1.98	
Senior Consulting Engineer/Scientist					
Technical Expert		\$45.39		1.98	
Consulting Engineer/Scientist					
Technical Expert	13	\$38.74	\$504	1.98	\$997
Principal Engineer/Scientist					
Senior Hydrologist		\$32.90		1.98	
Senior Scientist	60	\$32.90	\$1,974	1.98	\$3,909
Senior Engineer		\$32.90		1.98	
Senior Chemist		\$32.90		1.98	
Senior Engineer/Scientist					
Senior Hydrologist		\$26.50		1.98	
Senior Scientist		\$26.50		1.98	
Senior Engineer	185	\$26.50	\$4,903	1.98	\$9,707
Senior Chemist		\$26.50		1.98	
Project Control Specialist		\$26.50		1.98	
Associate Engineer/Scientist					
Engineer		\$16.28		1.98	
Scientist		\$16.28		1.98	
Air Quality Engineer		\$16.28		1.98	
Applied Ecologist		\$16.28		1.98	
Geologist	256	\$16.28	\$4,168	1.98	\$8,252
Chemist		\$16.28		1.98	
Hydrologist		\$16.28		1.98	
Quality Assurance Assistant		\$16.28		1.98	
Toxicologist		\$16.28		1.98	
Senior Technician					
Project Assistant		\$15.83		1.98	
Production Manager	12	\$15.83	\$190	1.98	\$376
Senior Draftsperson/CAD Operator	68	\$15.83	\$1,076	1.98	\$2,131
Computer Programmer		\$15.83		1.98	
Technician		\$15.83		1.98	
Technical Editor	16	\$15.83	\$253	1.98	\$501
Health & Safety Assistant		\$15.83		1.98	
Technician					
Project Assistant		\$11.89		1.98	
Technician		\$11.89		1.98	
Drafter					
Draftsperson		\$14.48		1.98	
Clerical					
Clerk/Word Processor	35	\$11.34	\$397	1.98	\$786
TOTAL LABOR:					
	645		\$13,464		\$26,659

ABB ENVIRONMENTAL SERVICES, INC.

TASK: 6 – Prepare CAR for JP–5 Site + Addenda for Truck Stand & North Fuel Farm
PROJECT: Contamination Assessment & Remediation Plan for North Fuel Farm, JP –5 Spill Site
and Truck Stand – NAS Cecil Field
MANAGER: Peter Redfern

Description	Base	Rate	Subtotal	Multiplier	Total
Air Fare				1.02	
Lodging				1.02	
Per Diem				1.02	
Car Rental/Fuel		\$50.00		1.02	
Field Van Rental/Fuel		\$80.00		1.02	
TOTAL TRAVEL:					
Telephone/Telefax:	30	\$2.20	\$66	1.02	\$67
Shipping – Letter/Other	6	\$75.00	\$450	1.02	\$459
Shipping – Sample Cooler		\$100.00		1.02	
Expendable Supplies				1.02	
Other – Binders	40	\$10.95	\$438	1.02	\$447
Other				1.02	
Other				1.02	
Other				1.02	
TOTAL OTHER DIRECT COSTS:					\$973
Drilling Services				1.02	
Analytical Services				1.02	
Surveying Services				1.02	
Data Validation Services				1.02	
Reproduction	300	\$0.04	\$12	1.02	\$12
Geophysical Surveying Services				1.02	
Subconsultant				1.02	
Other				1.02	
Other				1.02	
Other				1.02	
Other				1.02	
TOTAL SUBCONTRACT COSTS:					\$12
TOTAL COST:					\$40,308
Award Fee – Labor, Travel & ODCs			\$40,296	0.09	\$3,627
Award Fee – Subcontract			\$12	0.045	\$1
TOTAL COST PLUS AWARD FEE:					\$43,935

ATTACHMENT C

Supplemental Cost Estimate Data

**UNDERGROUND STORAGE TANK POAS
LOE ESTIMATES BY SUBTASK
NORTH FUEL FARM AREA, CECIL FIELD**

Task 1: Project Management

Subtask	Task Mgr	Tech. Expert	Princ. Sci.	Senior Sci.	Senior Eng.	Geol.	Eng.	Sci.	Technician	Proj. Asst.	QA Mgr	H&S Mgr	CAD Oper.	Proj. Cntrl.	Clerk
TFMR	78									78				52	
Project Mgmt	286									143					
Activity Cost Tracking	52									22					
Total LOE:	416	0	0	0	0	0	0	0	0	243	0	0	0	52	0

Task 2: Prepare NFFA Position Paper on Alternatives for Initial Remedial Action (IRA)

Subtask	Task Mgr	Tech. Expert	Princ. Sci.	Senior Sci.	Senior Eng.	Geol.	Eng.	Sci.	Technician	Proj. Asst.	Tech. Edit	H&S Mgr	CAD Oper.	Prod. Mgr.	Clerk
Develop List of IRAs			4	8	4										
Evaluate Alternatives			16		20										
Prep Position Paper			4		4	4					4		140	16	6
Review/Revise/Submit		2	2	2	4								20	2	2
Total LOE:	0	2	26	10	32	4	0	0	0	0	4	0	160	18	8

Task 3: Remedial Action Presentation Meetings

Subtask	Task Mgr	Tech. Expert	Princ. Sci.	Senior Sci.	Senior Eng.	Geol.	Eng.	Sci.	Technician	Proj. Asst.	Tech. Edit	H&S Mgr	CAD Oper.	Prod. Mgr.	Clerk
Prep for Jax Meeting			4		4						2		4		
Meeting with SouthDiv			14		8										
Revise Presentation			4										2		
Prep Inhouse "Dry Run"			4		4										
Modify Presentation			2										1		
Meeting with FDER			8		14										
Total LOE:	0	0	36	0	30	0	0	0	0	0	2	0	7	0	0

**UNDERGROUND STORAGE TANK POAS
LOE ESTIMATES BY SUBTASK
NORTH FUEL FARM AREA, CECIL FIELD**

Task 4: Contamination Assessment Field Investigation

Subtask	Task Mgr	Tech. Expert	Princ. Sci.	Senior Sci.	Senior Eng.	Geol.	Eng.	Sci.	Technician	Proj. Asst.	Tech. Edit	H&S Mgr	CAD Oper.	Draftsman	Clerk
Revise CAP/HASP			4		11	11					2	4	8		4
Present CAP to FDER			8		14										
Soil Boring/Sampling					210	210									
Monitoring Well Installation					170	170									
Groundwater Sampling					170	170									
SW/Sediment Sampling					30	30									
Slug Tests					70	70									
Wetlands Delineation				40		40									
Survey					70	70									
Total LOE:	0	0	12	40	745	771	0	0	0	0	2	4	8	0	4

Task 5: Presentation of Findings of Field Investigation @NFFA

Subtask	Task Mgr	Tech. Expert	Princ. Sci.	Senior Sci.	Senior Eng.	Geol.	Eng.	Sci.	Technician	Proj. Asst.	Prod. Mgr.	H&S Mgr	CAD Oper.	Draftsman	Clerk
Prep Graphics/Charts					8						16		186		5
Prep Draft Presentation			16		16										
Review/Revise			4		4						4		23		1
Present to SouthDiv			14		8										
Modify Presentation			2		2						2		12		1
Present to Cecil Field			14		8										
Modify Presentation			2		2						2		11		1
Present to FDER			8		14										
Present to "Unknown Party"			8		14										
Total LOE:	0	0	68	0	76	0	0	0	0	0	24	0	232	0	8

Task 6: Prepare a Contamination Assessment Report for the JP – 5 site, and Addendum for the Truck Stand and the NFF

Subtask	Task Mgr	Tech. Expert	Princ. Sci.	Senior Sci.	Senior Eng.	Geol.	Eng.	Sci.	Tech. Edit	Proj. Asst.	QA Mgr	Prod. Mgr	CAD Oper.	Drafts man	Clerk
Prep Truck Stand Addendum			4		24	24			2				6		6
Internal Report Review			4		4	4							2		2
Revise per FDER comments															
Prep NFF Addendum			4		24	24			2				6		6
Internal Report Review			4		4	4							2		2
Revise per FDER comments															
Prep NFFA CAR Narratives															
JP – 5			5		20	15									3
Av – Ord Dam			5		20	15									3
N. Containment Pond			5		20	15									3
Av – Ord/Perimeter Road			5		20	15									3
Gate 10 Dam			5		20	15									3
Alpha Dam			5		20	15									3
Possum Dam			5		20	15									3
Gate 14 Dam			5		20	15									3
Merge Overall Rpt. Narratives			5		20	30									4
Prep Soil Boring/MW Logs															
JP – 5						22									
Av – Ord Dam						8									
North Containment Pond						14									
Av – Ord/Perimeter Road						6									
Gate 10 Dam						8									
Alpha Dam						9									
Possum Dam						11									
Gate 14 Dam						5									
Data Validation/Assessment						72									
Graphics													70		
ABB – ES Internal Review		20	30						20			18			
Revise NFFA CAR					40	20							15		8
Revise per FDER comments															
Total LOE:	0	20	91	0	276	381	0	0	24	0	0	18	101	0	52

ASSUMPTIONS:

Overall schedule assumed to take approximately 11 months.

NOTE: Task Mgr (P. Redfern); Princ. Sci. (J. Williams); Senior Eng. (L. Routhier); Geol. (K. Murray); Tech. Expert (K. Busen); Senior Sci. (M. Dooley & W. Britton)